

IN THE CLAIMS:

The text of all pending claims, including withdrawn claims, is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claim 1 in accordance with the following:

1. (Currently Amended) A computer-aided design (CAD) system having a modeling mechanism that uses both two-dimensional and three-dimensional views of a solid object in an integrated manner, comprising:

two-dimensional drawing generating means for generating a plurality of orthographic projection views representing a three-dimensional model being defined by performing Boolean operations between a plurality of three-dimensional geometric features, and maintaining a projection view database associating ~~graphic elements contained in said generated plurality of orthographic projection views with corresponding three-dimensional geometric features~~ each of the three-dimensional geometric features with a plurality of two-dimensional graphic elements contained in said orthographic projection views;

two-dimensional drawing display means for displaying the generated orthographic projection views on a monitor screen;

graphic element selection means for selecting a graphic element contained in the orthographic projection views displayed on the monitor screen; and

three-dimensional feature selection means for identifying one of the three-dimensional geometric features that corresponds to the graphic element selected by the graphic element selection means based on the projection view database maintained by the two-dimensional drawing generating means, and setting the identified geometric feature to a selected state for further manipulation.

2. (Cancelled)

3. (Previously Presented) The CAD system according to claim 1, wherein:

the two-dimensional drawing display means displays a projection view of each geometric feature on the monitor screen, according to a line of sight defined for the orthographic projection views; and

the graphic element selection means selects a graphic element in the orthographic projection views of the geometric features provided by the two-dimensional drawing display means.

4. (Cancelled)

5. (Original) The three-dimensional CAD system according to claim 1, wherein the graphic element selection means makes the identified geometric feature appear with emphasis, in contrast to other features shown in a three-dimensional view on the monitor screen.

6. (Currently Amended) A computer-readable medium storing a CAD program which provides a modeling mechanism using both two-dimensional and three-dimensional views of a solid object in an integrated manner, the CAD program causing a computer to perform:

generating a plurality of orthographic projection views representing a three-dimensional model defined by performing Boolean operations between a plurality of three-dimensional geometric features, and maintaining a projection view database associating ~~graphic elements contained in said generated plurality of orthographic projection views with corresponding three-dimensional geometric features~~ each of the three-dimensional geometric features with a plurality of two-dimensional graphic elements contained in said orthographic projection views;

displaying the generated orthographic projection views on a monitor screen;

selecting a graphic element in the orthographic projection views displayed on the monitor screen; and

identifying one of the three-dimensional geometric features that corresponds to the selected graphic element based on the projection view database, and setting the identified geometric feature to a selected state for further manipulation.

7. (Previously Presented) The three-dimensional CAD system according to claim 1, wherein the orthographic projection views are hierarchically structured and support overlaid views.

8. (Previously Presented) The three-dimensional CAD system according to claim 1, further comprising:

database means for storing a database of the orthographic projection views associated with the three-dimensional geometric features.

9. (Previously Presented) The three-dimensional CAD system according to claim 8, wherein the three-dimensional feature selection means searches the database for the one of the three-dimensional geometric features corresponding to the selected graphic element.

10. (Previously Presented) The three-dimensional CAD system according to claim 1, wherein three-dimensional geometric features other than the identified one of the three-dimensional geometric features are masked.

11. (Previously Presented) The three-dimensional CAD system according to claim 1, wherein the orthographic projection views are defined by the system.

12. (Previously Presented) The three-dimensional CAD system according to claim 8, wherein the three-dimensional views are formed using Boolean operations on the three-dimensional geometric features.

13. (Currently Amended) A method for modeling objects in a computer-aided design system, comprising:

extracting geometric form definitions of a plurality of features of the object from a three-dimensional model database;

creating orthographic projection view data of the features, each orthographic projection view representing a three-dimensional model being defined by performing Boolean operations between a plurality of three-dimensional geometric features;

entering the orthographic projection view data into an orthographic projection view database ~~associating graphic elements contained in said orthographic projection view data with corresponding three-dimensional features from the plurality of features of the object~~ each of the three-dimensional features with a plurality of two-dimensional graphic elements contained in said orthographic projection views;

displaying the orthographic projection view data;

identifying a selected one of the features in the orthographic projection view database, the selected one of the features corresponding to a selected region of the displayed orthographic projection view data; and

displaying a three-dimensional view of the object with emphasis on the selected one of the features.

14. (Previously Presented) The method according to claim 13, wherein the extracting, creating, entering, displaying the orthographic projection view data, identifying, and displaying the three-dimensional view are performed in sequence.

15. (Previously Presented) The method according to claim 13, further comprising:
displaying the orthographic projection views and the three-dimensional views on the monitor screen simultaneously.

16. (Currently Amended) A computer-aided design (CAD) system having a modeling mechanism that uses both two-dimensional and three-dimensional views of a solid object in an integrated manner, comprising:

a two-dimensional drawing generating unit which generates a plurality of orthographic projection views representing a three-dimensional model by performing Boolean operations between a plurality of three-dimensional geometric features, and maintaining a projection view database associating ~~graphic elements contained in said generated plurality of orthographic projection views with three-dimensional geometric features~~ each of the three-dimensional geometric features with a plurality of two-dimensional graphic elements contained in said orthographic projection views;

a display which displays the generated orthographic projection views;

a graphic element selection unit which selects a graphic element contained in the orthographic projection views displayed on the display; and

a three-dimensional feature selection unit which identifies one of the three-dimensional geometric features that corresponds to the graphic element selected by the graphic element selection unit based on the projection view database maintained by the two-dimensional drawing generating unit, and which sets the identified geometric feature to a selected state for further manipulation.